gizing spring or the like in which direction the panels are coupled to each other. The present invention is not limited to the hinge mechanism **21***a*. Any mechanism can be used if it allows adjacent panels to be rotatably coupled to each other. Further, a latch mechanism **21***b* is provided on the side plate **18** opposed to the hinge mechanism **21***a*. When the panels are unfolded, the unfolding conditions are held by the latch mechanism **21***b*.

[0040] A solar panel **22** is stuck to the outer surface of the panel main body **11** to which sunlight is applied, such as the outer surfaces of the bottom plate **13** and cover plate **15**. The solar panel **22** is electrically connected to a battery **23** located in the panel main body **11**. The battery **23** includes a battery control unit **24**.

[0041] The panel main body **11** includes a controller **25**, a LAN card **26**, a wireless LAN antenna **27** and a functional element **28**. The functional element **28** is electrically connected to the battery **23** and also connected to the controller **25** through a signal line. In the case of the first attitude control panel **6**, the functional element **28** is an attitude control device and an attitude change device (e.g., a device for storing and emitting angular momentum such as reaction wheel). In the case of the communication panel **2**, the functional element **28** is a device for communicating with the ground. The panels **2** to **10** differ only in the functional element **28** and the other elements are the same.

[0042] Adjacent panels each corresponding to the panel main body **11** are connected to each other by a tape-shaped thermal conductivity sheet **29** having flexibility, which is drawn out of the notches **16** through the panels. The thermal conductivity sheet **29** is adhered to part of the panel main body **11** or the device thereof by an adhesive (not shown). The thermal conductivity sheet **29** is a high thermal conductivity sheet and serves to bring a difference in temperature among the panels as close as possible to zero. In other words, the panels are varied in temperature due to how sunlight is applied, heat radiation from the control device in the panel main body **11**, and the like. If, however, the panels are connected to each other by the thermal conductivity sheet **29**, heat is quickly transferred from a higher-temperature panel to a lower-temperature panel to keep the temperature difference among all the panels almost constant.

[0043] When the artificial satellite **1** generates and receives heat to excess and its entire temperature increases too much, the panel main body **11** can be provided with a radiator. The radiator can dissipate heat into space and the thermal conductivity sheet **29** can radiate heat.

[0044] When the artificial satellite **1** generates a little heat and its entire temperature decreases too much, a heater can be used as the prior artificial satellite to transfer its heat to the thermal conductivity sheet **29**. Since the panels are coupled to each other by the thermal conductivity sheet **29**, no heater is provided for each of the panels. The number of heaters can be reduced and so can be the number of controllers.

[0045] The corner panels **12** include a power supply connector **30** and a flexible cord **31**. The panels are electrically connected to each other through the power supply connector **30** and flexible cord **31** of the corner panels **12**. The power generated from solar cells of each panel is used in the device in the panel and for charging the battery in the panel. Excess power is supplied to another panel that is short of power by the electrical connection.

[0046] A thermal conductivity confirmation test conducted on the thermal conductivity sheet **29** and the adhesive by the inventor(s) of the present invention will now be described. The name of the thermal conductivity sheet **29** is PGS Graphite Sheet (made by Panasonic), the thermal conductivity thereof is 800 W/mK, and the thickness thereof is 0.15 mm. The name of the adhesive is 6030HK (made by Techno Alpha Co., Ltd.) and the thermal conductivity thereof is 60 W/mK.

[0047] It is when three panels are connected to each other at right angles, sunlight is applied to the surface of one of the panels at right angles, and no sunlight is applied to the other panel that the thermal conductivity sheet has to transfer the largest amount of heat in order to minimize a difference in temperature among the panels (worst conditions).

[0048] In the configuration described above, the amount of heat Q that has to be transferred by the thermal conductivity sheet can be estimated as follows at worst:

$$\begin{aligned} Q &= WsS \qquad \text{equation (1)} \\ &= 1358 \times 0.3 \times 0.3 \\ &= 120 \ [\mathrm{W}] \end{aligned}$$

[0049] where Ws is the solar constant and S is the area of the panels.

[0050] The transfer of heat among the panels is performed by the flow of heat through the thermal conductivity sheet and that of heat through the adhesive. Evaluating a difference in temperature required to transfer the heat of 120W given by the above equation (1) in each of the flows of heat, the results as shown in the following Tables 1 and 2 are obtained.

TABLE 1

Thermal Conductivity	800 W/mk
Thickness of Sheet	0.4 mm
Width of Connected Panels	80 mm
Distance between Connected Panels	1 mm
Difference in Temperature	4.7 K
Amount of Heat to be Transferred	120 W

[0051]

TABLE 2

Thermal Conductivity	60 W/mk
Area of Adhesion	25 cm^2
Thickness of Adhesion	0.2 mm
Difference in Temperature	0.16 K
Amount of Heat to be Transferred	120 W

[0052] Assume that heat flows through adjacent panels in the following order: a panel main body, an adhesive, a thermal conductivity sheet, an adhesive and a panel main body. The difference in temperature between the panels becomes about 5° C. and the uniformity of temperature can be achieved, as is apparent from Tables 1 and 2.